

## REMARKS

Reconsideration of this application, as amended, is earnestly requested.

Claims 23, 27, 40, and 43 are amended as shown above. Claims 24-26, 28-29, 41-42, and 44-45 are cancelled without prejudice, claim 46 is added, and claims 1-22 and 30-39 previously have been cancelled without prejudice. Claims 23, 27, 40, 43, and 46 are all the claims pending in the application, all being independent claims.

Claims 23, 26-27, 40, and 43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tran et al. (US 5,541,924) in view of Jamal (US 5,754,537); claims 24, 28, 41, and 44 as being unpatentable over Tran and Jamal and further in view of Buchholz (US 5,440,545); and claims 25, 29, 42, and 45 as being unpatentable over Tran and Jamal and further in view of Diachina (US 5,610,917). Claims 23-26 further stand rejected under 35 U.S.C. §101 because the claimed invention is directed to forming a data structure without a utility, which is non-statutory subject matter. Claim 43 is objected to for informalities. These rejections are respectfully traversed.

Regarding the 101 rejections, claims 24-26 have been cancelled and applicant respectfully believes the 101 rejections of those claims are now moot. Claim 23 has been amended to recite "a method for transmitting a data frame ..." and now relates to subject matter having utility.

MPEP 2106 IV.C.2 indicates that to satisfy section 101 requirements, the claim must be for a practical application of an § 101 judicial exception, which can be identified in various ways:

- (1) the claimed invention "transforms" an article or physical object to a different state or thing, or
- (2) the claimed invention otherwise produces a useful, concrete and tangible result.

For an invention to be “useful” it must satisfy the utility requirement of section 101. The USPTO’s official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. (MPEP 2107). In the present application, there is no question that utility exists. Claim 1 is directed to “a method for transmitting a data frame ...”, which results in the transmission of connection data from a terminal to a base station of a communications network. The “usefulness” element is clearly met.

Another consideration is whether the claimed invention produces a “concrete” result. Usually, this question arises when a result cannot be assured. In other words, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. *In re Swartz*, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000) (where asserted result produced by the claimed invention is “irreproducible” claim should be rejected under section 101).

In the present application, claim 23 recites a combination of elements. Applicant submits that one practicing the recited invention will be able to repeatedly transmit a data frame to a communications network by using the various elements recited in the claim. No undue experimentation is necessary. The results of the claim are therefore reproducible, thus satisfying the concrete result element.

In *State Street*, the Federal Circuit examined some of its prior section 101 cases, observing that the claimed inventions in those cases were each for a “practical application of an abstract idea” because the elements of the invention operated to produce a “useful, concrete and tangible result.” *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F. 3d 1368, 1373-74, 47 USPQ2d 1596, 1602-02 (Fed. Cir. 1998). For example, the court in *State Street* noted that the claimed invention in *Alappat* “constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it produced ‘a useful, concrete and tangible result’—the smooth waveform.” *Id.*

Similarly, the claimed invention in *Arrhythmia* “constituted a practical application of an abstract idea (a mathematical algorithm, formula, or calculation), because it corresponded to a useful, concrete and tangible thing—the condition of a patient’s heart.” *Id.*

In the present matter, the practical application of claim 23 relates to transmitting a data frame from a mobile station to a network. Applicant submits that several elements recited in claim 23 may be interpreted as including an abstract idea such as a mathematical algorithm, formula, or calculation. In this regard, the claim is similar to the claims addressed in both the *Alappat* and *Arrhythmia* matters and noted by the court in *State Street*. However, claim 23 recites more than this abstract idea and produces a tangible result, the transmission of a data frame. This data frame is analogous to the “smooth waveform” in *Alappat*. In accordance with Federal Circuit precedent, the result of claim 23 (“transmitting a data frame”) has a practical application. Thus, the tangible result element has also been met.

In summary, the applicant has demonstrated that in claim 23, a data frame is transmitted from a mobile station to a network. This transmission meets the statutory requirement of 35 U.S.C. § 101. The applicant has further demonstrated that claim 23 includes a “practical application” since the final result achieved by this claim (e.g., transmitting a data frame) is “useful, tangible and concrete.” If a claim is directed to a practical application of a § 101 judicial exception and produces a result tied to the physical world that does not preempt the judicial exception, then the claim meets the statutory requirement of 35 U.S.C. § 101. (See, MPEP 2106.IV.C.1, “The conclusion that a particular claim includes a 35 U.S.C. 101 judicial exception does not end the inquiry because the practical application of a judicial exception may qualify for patent protection.”) Since claim 23 meets the practical application requirement, this claim is directed toward statutory subject matter in accordance with section 101 for this additional reason.

Applicant respectfully requests reconsideration and withdrawal of the 101 rejections.

Claim 43 has been amended to overcome the Examiner's objection for informalities, and the applicant respectfully requests reconsideration and withdrawal of the objection.

Claims 23, 27, 40 and 43 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tran in view of Jamal. These rejections are respectfully traversed.

Independent claim 23 recites the feature of "assigning a first field of the header portion to indicate whether the data frame has a request of a time resource while sending data included in the data portion, wherein the first field has a first logic value when the data frame has the request of the time resource". The Examiner stated that the access request, referred to as the header segment in Tran, column 3, lines 58-59 teaches 'the first field to indicate to the network that the data frame has a time resource request'.

However 'the header segment' of Tran does not indicate whether the data frame has a time resource request or not. In fact, Tran's header segment is transmitted as an access request when an uplink time slot is designated for packet transmission and is also unused. That is, Tran's header segment is not a part of the real header (or header itself) of data frame indicating the contents of the rest part of the data frame. Tran's header segment is just the first segment of the data packet when the data packet is continuously transmitted. *See* Tran, 4: 15-41.

Because Tran's header segment is not a header or a part of the header of data frame, Tran failed to teach or suggest the first field has either a first value or a second value, and the first value is assigned when the data frame has a time resource request.

Further, independent claim 23 has a feature of "assigning a third field of the header portion to contain a priority parameter representing control information related to at least one of a fragmentation and a retransmission". The Examiner stated that Tran, 3: 64-67 states "the remainder of the uplink time slot may include error detection bits that are the result of a Cyclic Redundancy Check (CRC) 218 computation".

However, the 'priority parameter' of claim 23 is quite different from the error detection bits that are the result of a CRC computation. The 'priority parameter' of claim 1 is for representing control information related to at least one of a fragmentation and a retransmission, but the error detection bits from a CRC computation is only for error checking, not for representing any of fragmentation or retransmission.

Moreover Tran states that "the remainder of the uplink time slot may include error detection bits that are the result of a Cyclic Redundancy Check (CRC) 218 computation". That is, error detection bits from Tran's CRC computation is not a part of header segment. However, the third field of claim 1 is a part of header of the data frame. See, Tran, Fig. 2 and 3: 49-67.

As correctly recognized by the Examiner, Tran failed to teach a second field identifying an amount of time resource required. The Examiner used Jamal, 6: 45-51 to teach this feature ("a logical channel field Cf1 identifying the type of logical channel for which a mobile station is requesting access, a field Cf2 identifying the transmitting mobile station and a field Cf3 identifying the number of TDMA time slots per frame required for the TDMA channel being requested").

However, Jamal's field Cf3 is not a part of header of data frame. Jamal's field Cf3 is a part of the access request burst transmission. Moreover claim 23 recites "assigning a second field of the header portion to identify an amount of the time resource requested, when the first field has the first logic value". Neither Tran nor Jamal teach or suggest this relationship between the first field and the second field of the claim 23.

Thus Tran and Jamal, alone or in combination, do not teach or suggest all the features of independent claim 23 for at least above reasons. Thus, independent claim 23 defines patentable subject matter.

Independent claims 27, 40, 43 and newly added independent claim 46 recite similar features as independent claim 23, thus independent claims 27, 40, 43 and 46 are patentable over Tran and Jamal as well.

As set forth in MPEP 2143, to show a *prima facie* case for obviousness, all the prior art references, either individually or combined, must teach all the claim limitations. Neither Tran nor Jamal teach all the features of independent claims 23, 27, 40, 43, and 46, and applicant submits that a *prima facie* case for obviousness has not been shown and that the independent claims are patentable over the cited prior art.

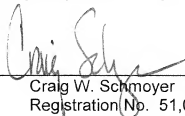
### CONCLUSION

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain at issue which the Examiner feels may be best resolved through a telephone interview, the Examiner is kindly invited to contact the undersigned at (213) 623-2221.

Respectfully submitted,  
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By: \_\_\_\_\_

  
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